THE JOURNAL
OF
ANIMAL ECOLOGY

EDITED FOR THE
BRITISH ECOLOGICAL SOCIETY
by
CHARLES ELTON,
DENNIS CHITTY
and
H. C. GILSON

VOLUME 20
1951

WITH SIX PLATES, AND NUMEROUS FIGURES
IN THE TEXT

CAMBRIDGE
AT THE UNIVERSITY PRESS
1951

Printed in Great Britain at the University Press, Cambridge
(Brooke Crutchley, University Printer)
and published by the Cambridge University Press
London: Bentley House, N.W.1
American Branch: New York
Agents for Canada, India, and Pakistan: Macmillan

CONTENTS

ORIGINAL PAPERS

PAGE

Bagenal, T. B. A note on the papers of Elton and Williams on the generic relations of species in small ecological communities 242

Barnes, H., Crisp, D. J. and Powell, H. T. Observations on the orientation of some species of barnacles 227

Brian, Anne D. The pollen collected by bumble-bees 191

Buxton, A. P. Further observations of the night-resting habits of monkeys in a small area on the edge of the Semliki Forest, Uganda 31

Crisp, D. J. *See* **Barnes, H.** 227

Evans, F. G. C. An analysis of the behaviour of *Lepidochitona cinereus* in response to certain physical features of the environment 1

Gibson, J. A. The 1950 census of gannets (*Sula bassana*) on Ailsa Craig 87

Guild, W. J. McL. The distribution and population density of earthworms (Lumbricidae) in Scottish pasture fields 88

Hough, J. S. The effect of wind on the distribution of Cynipid galls caused by *Neuroterus lenticularis* Olivier 165

Jones, J. R. Erichsen. An ecological study of the River Towy 68

Jones, N. S. The bottom fauna off the south of the Isle of Man 132

Lack, David and Elizabeth. Migrations of insects and birds through a Pyrenean pass . 63

Lack, David and Elizabeth. Further changes in bird-life caused by afforestation . . 173

Le Cren, E. D. The length-weight relationship and seasonal cycle in gonad weight and condition in the perch (*Perca fluviatilis*) 201

Lumsden, W. H. R. The night-resting habits of monkeys in a small area on the edge of the Semliki Forest, Uganda. A study in relation to the epidemiology of sylvan yellow fever . 11

Miles, J. A. R. and Shrivastav, J. B. Ornithosis in certain sea-birds 195

Powell, H. T. *See* **Barnes, H.** 227

Reynoldson, T. B. The dispersal of *Urceolaria mitra* (Peritricha) epizoic on flatworms . . 123

Ribbands, C. R. The flight range of the honey-bee 220

Shrivastav, J. B. *See* **Miles, J. A. R.** 195

Stopford, Sheila C. An ecological survey of the Cheshire foreshore of the Dee estuary . 103

Williams, C. B. Seasonal changes in flight direction of migrant butterflies in the British Isles 180

Williams, C. B. Intra-generic competition as illustrated by Moreau's records of East African bird communities 246

Wimpenny, R. S. The effect of vegetation on the breeding of newts, *Molge cristata* and *Molge vulgaris* 98

Yapp, W. B. The population of rooks (*Corvus frugilegus*) in west Gloucestershire . . . 169

Zahar, A. R. The ecology and distribution of black-flies (Simuliidae) in south-east Scotland 33

REVIEWS

Auerbach, Stanley. *See* **Park, Orlando** 150

Beaufort, L. F. de. Zoogeography of the land and inland waters (T. T. Macan) . . . 257

Corley, Glenn. *See* **Park, Orlando** 150

Franz, Herbert. Bodenzoologie als Grundlage der Bodenpflege (C. Overgaard Nielsen) . 149

PAGE

Hutchinson, G. E. Survey of contemporary knowledge of biogeochemistry. 3. The biogeochemistry of vertebrate excretion (Richard S. Miller) 147

Janetschek, Heinz. Tierische Successionen auf hochalpinem Neuland. Nach Untersuchungen am Hintereis-, Niederjoch- und Gepatschferner in den Oetztaler Alpen (C. Overgaard Nielsen) 148

Kühnelt, Wilhelm. Bodenbiologie mit besonderer Berücksichtigung der Tierwelt (C. Overgaard Nielsen) 150

Leeson, H. S., Lumsden, W. H. R., Yofe, J. and Macan, T. T. Anopheles and malaria in the Near East (S. R. Christophers) 255

Lumsden, W. H. R. *See* **Leeson, H. S.** 255

Macan, T. T. *See* **Leeson, H. S.** 255

Park, Orlando, Auerbach, Stanley and Corley, Glenn. The tree-hole habitat with emphasis on the pselaphid beetle fauna (Charles Elton) 150

Pearsall, W. H. Mountains and moorlands (P. F. Holmes) 254

Sixth annual report of the Nuffield Foundation 258

Thienemann, A. Verbreitungsgeschichte der Süsswassertierwelt Europas (T. T. Macan) . 145

Yofe, J. *See* **Leeson, H. S.** 255

NOTICES OF PUBLICATIONS ON THE ANIMAL ECOLOGY OF THE BRITISH ISLES 152, 259